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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,630	01/19/2005	Eiji Ueda	10873.1556USWO	4212
53148 7590 04/30/2007 HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			EXAMINER NGUYEN, LINH THI	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 04/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/521,630	UEDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Linh T. Nguyen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being unpatentable by Kaneko (JP Publication Number 61145743).

In regards to claim 1, Kaneko discloses a deficiency detecting apparatus (Fig. 1), which detects deficiencies on an information medium that are unable to be recorded or reproduced when an information signal is recorded/reproduced with respect to the information medium using a light beam generated by a laser light source (Fig. 1, element 4), comprising: a power adjusting section for adjusting an emitting power of the laser light source to an optimum value (Fig. 1, element 13); and a deficiency detecting section for comparing (Fig. 1, element 14) a threshold value (Fig. 4) determined by calculating a value of the emitting power of the laser light source adjusted by the power adjusting section with a value corresponding to reflected light that is the light beam reflected by an information layer of the information medium (Page 7, lines 7-12; the detection signal (1) is obtained by detecting the change in the amount of laser beam (refer to page 4, lines 8-10)), and detecting the deficiencies on the information layer in accordance with a result of the comparison (Page 7, lines 13-15).

In regards to claim 2, Kaneko discloses a deficiency detecting apparatus, wherein the deficiency detecting section determines the threshold value (Fig. 4) in accordance with an emitting power (Page 7, lines 7-12; the detection signal can either reach from level 1 to 5 within the range of the curve shown in fig.4) selected from a predetermined range of laser power (Page 4, lines 4-11; shows the range of power for reproducing/recording power).

In regards to claim 3, Kaneko discloses a deficiency detecting apparatus, wherein the deficiency detecting section determines the threshold value (level) in accordance with an average value of the emitting power adjusted by the power adjusting section (Fig. 4, shows a center line which corresponds to the average value and then deviates from the center of line).

In regards to claim 4, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Page 4, lines 4-7), and the deficiency detecting section determines the threshold value in accordance with the value obtained by summing the plural power levels at predetermined rates (Fig. 2, element 12).

In regards to claim 5, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Page, 4, lines 4-7), and the deficiency detecting section determines the threshold value in accordance with the highest power level among the plural power levels (Fig. 4, level 5).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Kawashima et al (US Publication number 2003/0133378). For a description of Kaneko see the rejection, supra.

In regards to claim 6, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Fig. 2, shows plural power levels), and the deficiency detecting section (controller 1) determines the threshold value (Fig. 4).

Kaneko does not but Kawashima et al discloses an apparatus, wherein determines the threshold value in accordance with an erasing power level that is used for erasing among the plural power levels (Fig. 13A-B). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Kaneko apparatus to have an erase power level in determining a defect threshold value. The motivation for doing so would have been to improve the recording/reproducing by detecting an area of the deteriorated recording film due to defect.

Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Hiroshi et al (JP Publication number 09115142).

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In regards to claim 7, Kaneko discloses a deficiency detecting apparatus, which detects deficiencies on an information medium that are unable to be recorded or reproduced when an information signal is recorded/reproduced with respect to the information medium using a light beam generated by laser light source (Fig. 1 and 2), comprising: a power adjusting section for adjusting an emitting power of the laser light source to an optimum value (Fig. 1 or 2, element 13); and a deficiency detecting section (controller 1), and for comparing (Fig. 1 or 2, element 14) a value corresponding to the signal for the reflected light amount with a predetermined threshold value (Fig. 4) and detecting the deficiencies on the information layer in accordance with a result of the comparison (Page 7, 13-15). However, Kaneko et al does not disclose an amplifier for amplifying a signal corresponding to reflected light that is the light beam reflected by an information layer of the information medium at an amplification factor determined in accordance with the emitting power of the laser light source amount.

In the same field of endeavor, Hiroshi et al discloses an amplifier (Fig. 1, elements 13, 14 and 15) for amplifying a signal corresponding to reflected light that is the light beam reflected by an information layer of the information medium at an amplification factor determined in accordance with the emitting power of the laser light source amount (Paragraph [0011]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the deficiency detection apparatus of Kaneko to include an amplifier as taught by Hiroshi et al. The motivation for doing so would have been to detect fluctuation in the signal.

In regards to claim 8, Kaneko discloses a deficiency detecting apparatus, wherein the deficiency detecting section determines the threshold value (Fig. 4) in accordance with an emitting power (Page 7, lines 7-12; the detection signal can either reach from level 1 to 5 within the range of the curve shown in fig.4) selected from a predetermined range of laser power (Page 4, lines 4-11; shows the range of power for reproducing/recording power).

In regards to claim 9, Kaneko discloses a deficiency detecting apparatus, wherein the deficiency detecting section determines the threshold value (level) in accordance with an average value of the emitting power adjusted by the power adjusting section (Fig. 4, shows a center line which corresponds to the average value and then deviates from the center of line).

In regards to claim 10, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Page 4, lines 4-7), and the deficiency detecting section determines the threshold value in accordance with the value obtained by summing the plural power levels at predetermined rates (Fig. 2, element 12).

In regards to claim 11, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Page, 4, lines 4-7), and the deficiency detecting section determines the threshold value in accordance with the highest power level among the plural power levels (Fig. 4, level 5).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Hiroshi et al (JP Publication number 09115142) as claim 7 above and in further view of Kawashima et al (US Publication number 2003/0133378).

In regards to claim 12, Kaneko discloses a deficiency detecting apparatus, wherein the emitting power adjusted by the power adjusting section is composed of plural power levels (Fig. 2, shows plural power levels), and the deficiency detecting section (controller 1) determines the threshold value (Fig. 4).

Kaneko and Hiroshi et al do not but Kawashima et al discloses an apparatus, wherein determines the threshold value in accordance with an erasing power level that is used for erasing among the plural power levels (Fig. 13A-B). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Kaneko and Hiroshi et al apparatus to have an erase power level in determining a defect threshold value. The motivation for doing so would have been to improve the recording/reproducing by detecting an area of the deteriorated recording film due to defect.

### ***Response to Arguments***

Applicant's arguments filed 2/14/07 have been fully considered but they are not persuasive. Applicant's argue that Kaneko does not disclose "that the detection limit level (5) of an optical disk device is determined by calculating the emitting power of the laser light source adjusted by a power adjusting section." However, it is inherent that the calculation is done because the device has set the power level (5) being the



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optimum power and (3) being the threshold value (page 7, lines 6-12). The device already calculate the power to have certain limits of tolerance, therefore, is able to compare the level of detection level (1) (reflected light from the medium) to the level of output power level of (5) and (3) to detect a defect (page 7, lines 6-15). Therefore, claim 1-12 are not patentable in view of Kaneko.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN  
April 25, 2007



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER